

“A Sea Change in Shipboard Watchstanding”

Improving Watchstander Resilience

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In collaboration with Naval Post Graduate School ,Dr. Nita Shattuck, -
www.nps.edu
and Navy Operational Stress Control Program - www.NavyNavStress.Com



It Doesn't Have to be This Way....





Naval Logistics Library



Operational Stress Control Alternative Watch Schedule 3-9 Watch Rotation

"Fatigue is a major factor in many mishaps and can contribute to injury, equipment damage, and loss of life. The 3/9 watch rotation can be a tremendous tool to combat fatigue."

Dr. Nick Davenport,
retired Capt. Naval Safety Center

The 3/9 Watchbill: "A Sea Change" in Readiness

In the Surface Warfare community fatigue, a common factor in many mishaps and near misses, is often simply accepted as a "cost of doing business". Traditional watch rotations, which do not account for circadian rhythm or sleep patterns, are a large contributor to fatigue. The 3/9 watch rotation solves several issues with a simple paradigm shift: build the schedule around the people that execute it and the mission that it supports.

The 3/9 Watchbill Design

- Requires 4 watch teams
- 3 hour watch periods
- 9 hour period between watches allows at least 6 hrs sleep each night
- Watch teams stand the same watch every day
- Rotation shifts one watch every other Sunday

The 3/9 Watchbill Benefits

- Stable routine allows circadian rhythm and sleep pattern
- Stable routine allows simpler daily work and PT routine
- Watch Teams can be aligned (Bridge/CIC/Engineering)
- 9 hour period between watches allows at least 6 hrs sleep each night
- Relatively short 3 hour watch promotes alert watch standers
- Engineers spend less time in a heat stress environment



www.navy.navstress.com

OPERATIONAL STRESS CONTROL • BUILDING A RESILIENT NAVY

"The improvement in watch stander alertness was noticeable from the first week after this rotation was implemented. Feedback from the crew was very positive, but it required a great deal of commitment to avoid slipping back into the old routine. The results were outstanding – where it counts, in accomplishing the mission."

Capt. John Cordie, former commanding officer, USS San Jacinto
2010 BUMED "Epictetus" Award recipient for innovative leadership

What are the **Challenges**? There are a few but they can be mitigated:

- Shorter watches mean a higher turnover – more churn
- Daily routine must be modified to allow early taps and late reveille for late watches
- Not all rates can support 4 qualified sections

Some **"Best Practices"** to ease adaptation of the 3/9 Watchbill

- Modify meal hours to accommodate breakfast for 0600-0900 watches
- Schedule routine meetings between 0900-1500
- Schedule daily Ops briefs during afternoon
- Move Divisional Quarters to late morning or after lunch



"I told a SWOS PCO class that there was no way to meet all the heat stress needs (twice the time out of the plant as on watch, 6 hours of sleep per night) on underway. The 3/9 watch rotation proved me wrong."

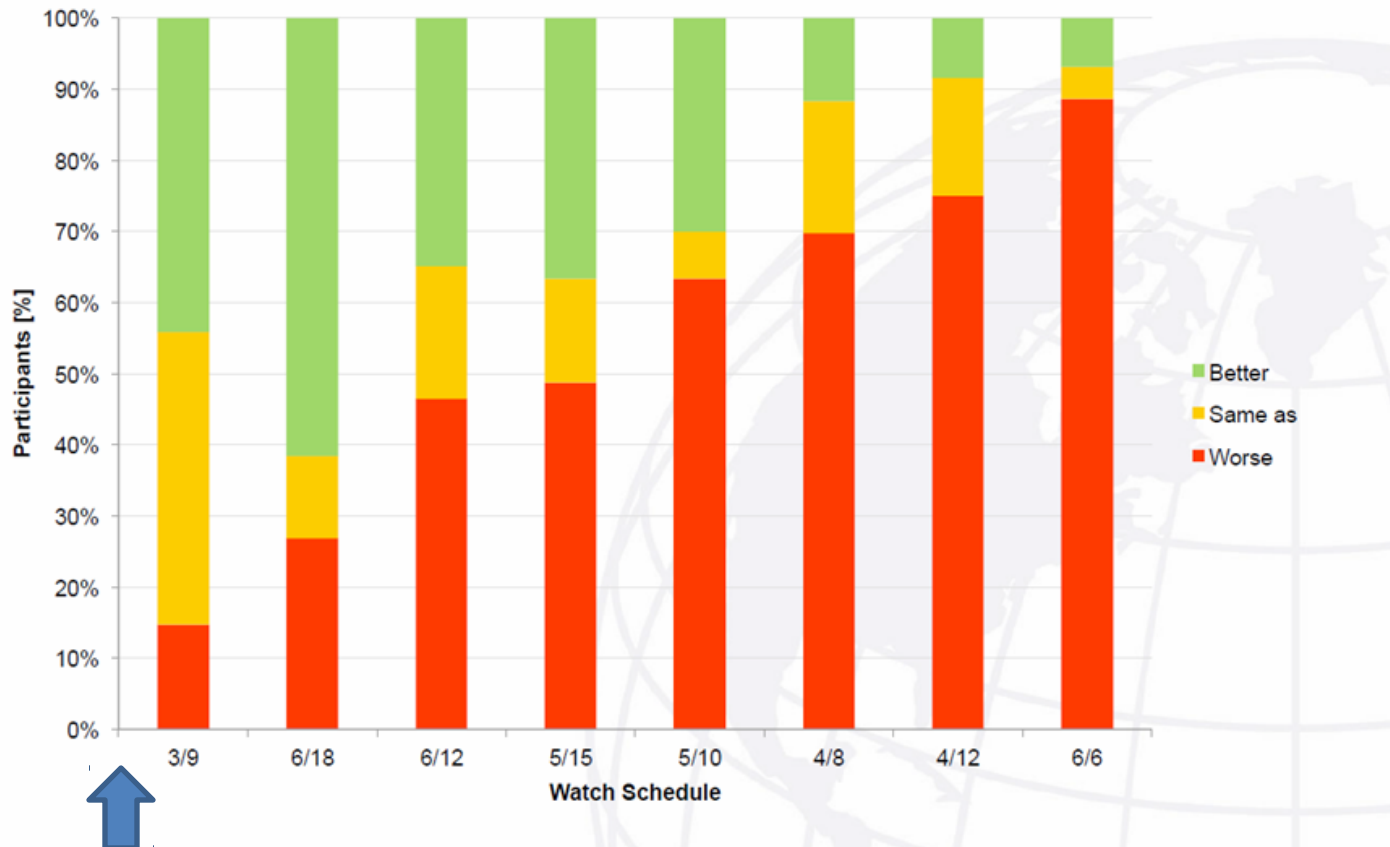
Capt. Neil Parrott, former commanding officer, Surface Warfare Officers School

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Self Reported Satisfaction with Schedule

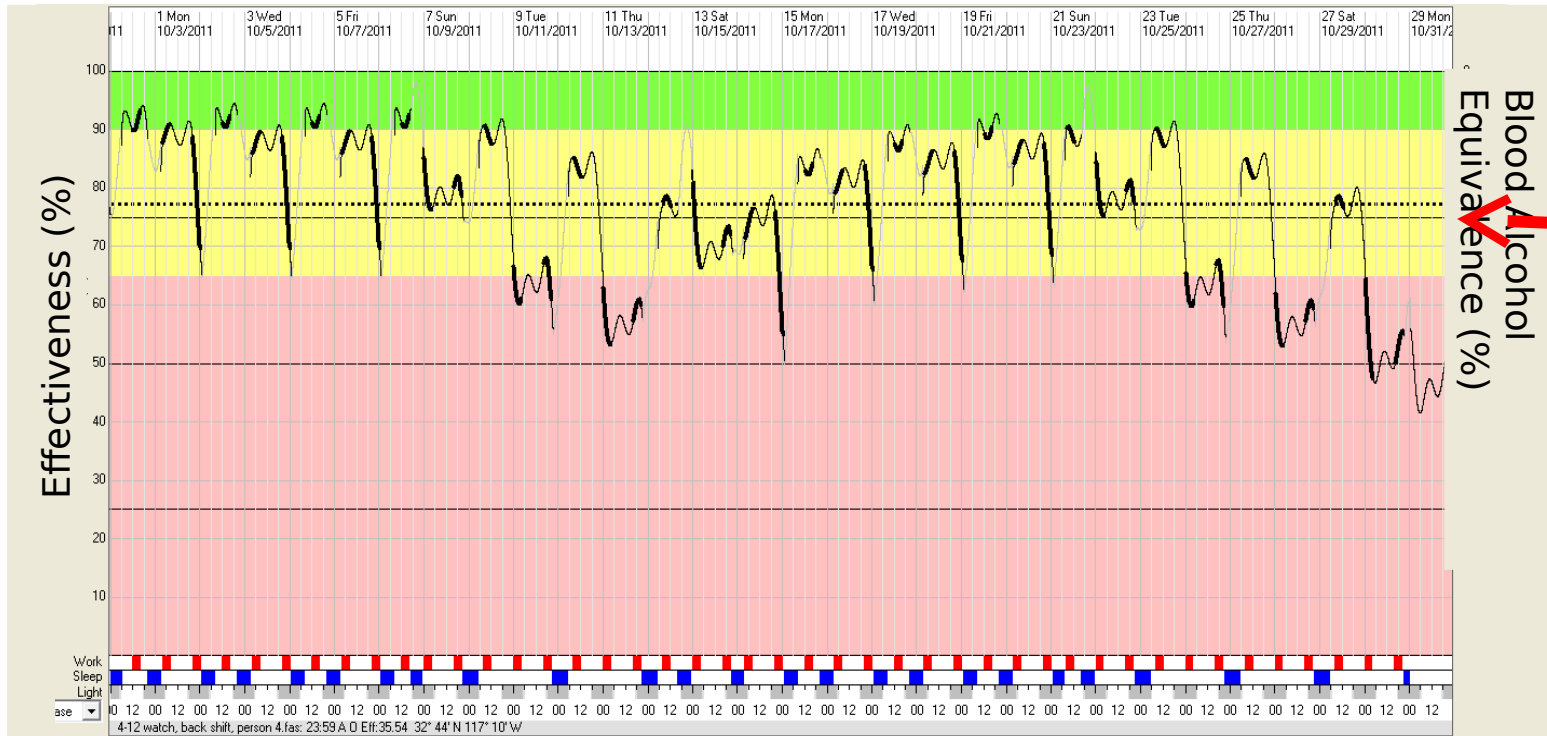


Interpretation: Less Red Means Better Satisfaction



FAST Printout of 6/12 Watch Rotation

Effectiveness



This graph shows the effectiveness of watch standers on a 4-section rotation using the more traditional **6/12** schedule. Watch standers on this watch have a mean **82.7** percent predicted effectiveness on watch. **33.3** percent of the time, an individual's predicted effectiveness falls below 80 percent.



Maintaining 24 hour Circadian

	0600-0900	0900-1200	1200-1500	1500-1800	1800-2100	2100-2400	0000-0300	0300-0600
Sunday	1	2	3	4	1	2	3	4
Monday	1	2	3	4	1	2	3	4
Tuesday	1	2	3	4	1	2	3	4
Wednesday	1	2	3	4	1	2	3	4
Thursday	1	2	3	4	1	2	3	4
Friday	1	2	3	4	1	2	3	4
Saturday	1	2	3	4	1	2	3	4
Sunday	1	2	3	4	1	2	3	4
Monday	1	2	3	4	1	2	3	4
Tuesday	1	2	3	4	1	2	3	4
Wednesday	1	2	3	4	1	2	3	4
Thursday	1	2	3	4	1	2	3	4
Friday	1	2	3	4	1	2	3	4

	0600-0900	0900-1200	1200-1500	1500-1800	1800-2200	2200-0200	0200-0600
Saturday	1	2	3	4	1	2	3

	0600-0900	0900-1200	1200-1500	1500-1800	1800-2100	2100-2400	0000-0300	0300-0600
Sunday	4	1	2	3	4	1	2	3
Monday	4	1	2	3	4	1	2	3
Tuesday	4	1	2	3	4	1	2	3
Wednesday	4	1	2	3	4	1	2	3
Thursday	4	1	2	3	4	1	2	3
Friday	4	1	2	3	4	1	2	3
Saturday	4	1	2	3	4	1	2	3
Sunday	4	1	2	3	4	1	2	3
Monday	4	1	2	3	4	1	2	3
Tuesday	4	1	2	3	4	1	2	3
Wednesday	4	1	2	3	4	1	2	3
Thursday	4	1	2	3	4	1	2	3
Friday	4	1	2	3	4	1	2	3

In the 3/9 watchstanding schedule, Sailors stand 2 watches each day, separated by 12 hours. The 4-section schedule rotates every 2 weeks—probably on Saturday or Sunday. As shown here, on Saturday evening, Sections 1, 2 and 3 each stand a 4-hour watch and then roll forward into standard 3-hour watch the following day.

Advantages include: easy to remember watch assignment, everyone stands 6 hours of watch per day in 2 3-hour blocks, no one stands longer than a 4 hour watch, no back-to-back watches, at least 9 hours off between each watch. Note: on the day of rotation, one watch section gets 12 hours off, one gets 11 hours off and one gets 10 hours off.

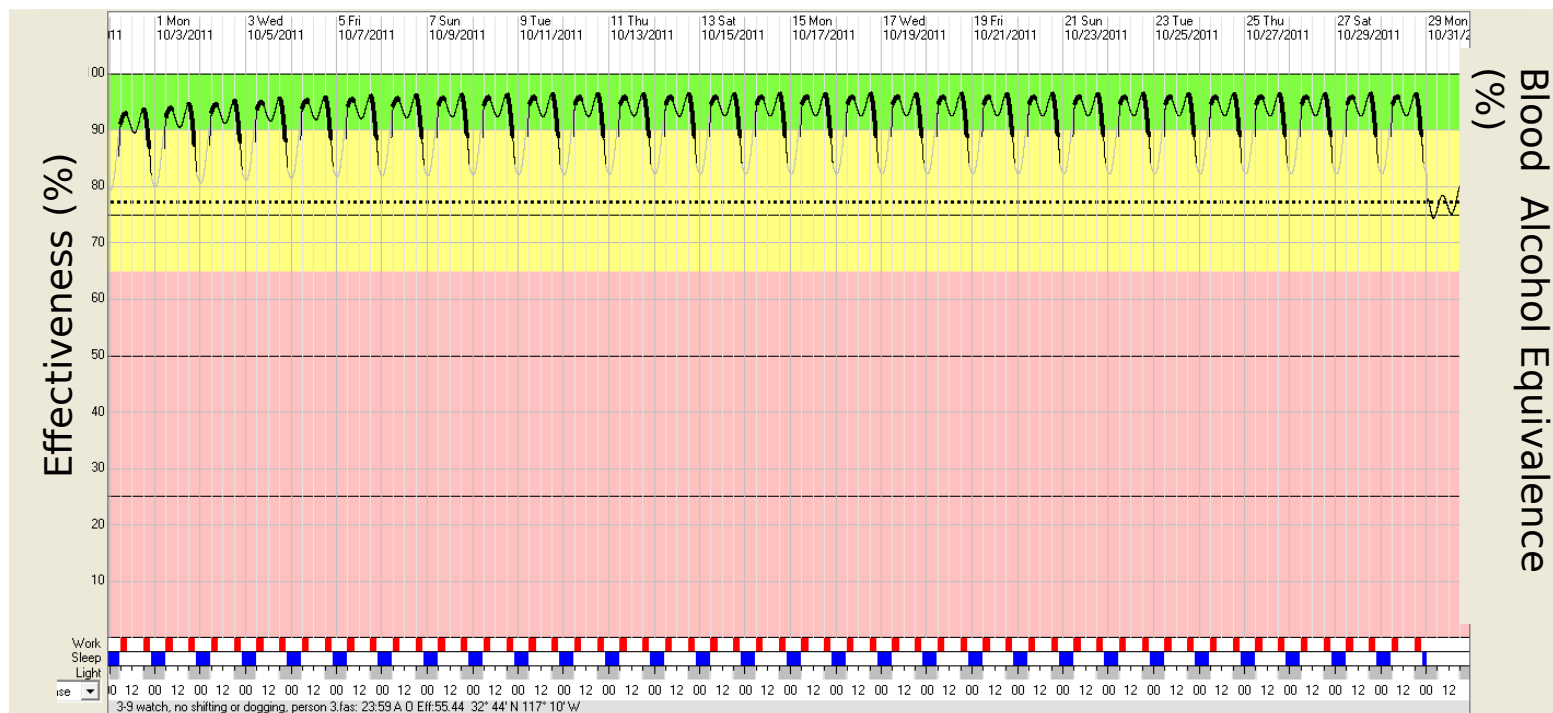
3/9 watch shifts forward every other Sunday

- “All Hands” events are limited to the hours between 0900 and 1500
- All watchstanders receive 6-7 hours of sleep each night
- Short (3-4 hour) watches - - improve focus, less exposure to heat stress, but more turnovers per day



FAST Printout of 3/9 Watch Rotation

Effectiveness



This graph shows the effectiveness of watch standers on a 4-section rotation using the **3/9** schedule. Watch standers on this watch have a mean **92.56** percent predicted effectiveness on watch. Only **5.8** percent of the time, an individual's predicted effectiveness falls below 80 percent.